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The Lack of Friends amongst Adolescents and Well-Being

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Abstract: The purpose of this study is to analyze the risk behaviour and the well-being of adolescents that declare not to have friends. The national representative sample was composed by individuals that participated in the study in Portugal, integrating the European study HBSC – Health Behaviour in School – aged Children. The study occurred during January 2006 and included a total of 4877 students from the 6th, 8th and 10th grades from Portuguese public schools, randomly selected with an average age of 14 years old. The instrument used was the HBSC questionnaire. The unit was the class. The results revealed that the lack of friends can influence the well-being of adolescents. Youngsters who do not have friends are unhappy, have more psychological complains and are less satisfied with life. The lack of friends may also interfere with another important area of adolescents' lives: school environment. Adolescents who do not have friends do not enjoy school and are involved more often in bullying behaviours. Peer group is often associated to great engagement in risk behaviour, yet the lack of friends can also have a negative impact on health and well-being.

Keywords: Lack of friends, Risk behaviour, Well-being, Adolescents

The lack of friends amongst Portuguese Adolescents

Interpersonal relationships have great importance during adolescence, especially for the psychological well-being. The sensation of well-being during adolescence can depend on the integration and acceptance of the peer group (Corsano, Majorano, & Champretavy, 2006). The relationships of adolescents with peer groups influence behaviours and attitudes. Not having friends may lead adolescents to feelings and behaviours that influence their lifestyle negatively. Loneliness is one of those feelings. Analyzing the consequences of lack of friends, of loneliness and all the negative effects that could be associated to dissatisfaction with social relationships during adolescence is relevant to prevent risk behaviours.

Expectations that a person conform to the peer group, have close and intimate friends, and become romantically involved reach a peak during adolescence. Independence is identified as a central developmental task. These disparate tasks would appear to pull adolescents in conflicting directions and set them up for the experience of social isolation (Larson, 1999).

The causes of lack of friends, or social distance, can be many. They are found associated to personality characteristics, such as shyness and reserve, and to the difficulty in maintaining positive social relationships, such as rejection, passivity and peers' negligence. Social distance caused by the lack of friends might predict negative consequences for adolescents, such as anxiety, low self-esteem, symptoms of depression, low quality friendships or academic difficulties (Rubin, Coplan, & Bowker, 2009).

Studies indicate that the human species, as well as most other mammalian species, have developed a motivation system that promotes social attachment for reasons of safety and other benefits of social connection. Indeed, the feeling of loneliness, created when needs for social attachment are not fulfilled, may be a manifestation of this motivational system (Larson, 1999).

Friendship plays an important role in health and well-being of adolescents. A close friendship with quality and peers group provides psychological well-being and strategies for coping with stress. It can still influence many contexts of adolescents' lives, such as attitude towards school or the relationship with



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parents (Wilkinson, 2010). A negative relationship with peers can hinder this development, resulting in a possible social and emotional harm (Kim, Rapee, Oh, & Moon, 2008).

The lack of friends can influence the perception of life satisfaction, and it is generally defined as a negative feeling of loneliness that occurs when people understand the deficient quality or quantity of their social relationships. During adolescence, there is a great susceptibility for loneliness, due to the changes that start to occur in social relationships. Life satisfaction is important during adolescence (Çivitci & Çivicti, 2009). Adolescents more satisfied with life maintain the most positive relationships with peers and with parents (Gilman & Huebner, 2006) and have more social support from parents, friends and teachers (Suldo & Huebner, 2006).

There are various causes of loneliness, but the most important is the no satisfaction with social relationships maintained during childhood and adolescence (Le Roux, 2009). It is necessary to redefine the social relationships they maintain, with family and peers, as they are prepared to assume new social roles. When something is missing in this procedure, the adolescent can turn to isolation and the sensation of loneliness can be a negative effect towards the satisfaction of life (Çiviti & Çivity, 2009).

Loneliness is related to a range of emotional, social, and behavioural problems for children, adolescents, and adults. Emotional problems include low self-esteem, depression, and social anxiety. Social problem include peer rejection and victimization, lack of friendships, and lack of high quality friendships. Behavioural problems include shyness, social withdrawal, spending more time alone, and decrease of the participation in extracurricular school activities (Kupersmidt, Sigda, Sedikides, & Voegler, 1999). In peers' settings, feelings of loneliness are comparatively rare. However, the implication of this loneliness is great. Adolescents who feel more lonely during this time are more likely to show depression, lower self-esteem, and have more problematic behaviours as rated by parents and teachers. Peer contexts may be attributed to a mixture of shame and humiliation with loneliness. Adolescents do not just feel alienated from peers, they also feel like they have failed a critical task of being socially connected. Loneliness in this context is a significant risk factor for adolescents, possibly because it is an indicator that the cultural imperative to social attachment has not been fulfilled (Larson, 1999).

Adolescents who do not have friends are those who show a greater predisposition to psychological disorders, anxiety, substance abuse, risky sexual

practice and aggressive behaviour, among others (Saluja, Lachan, Scheidt, Overpeck, Sun, & Giedd, 2004), and more consumption of illicit substances and tobacco (Tomé, Matos, & Dinis, 2008a; Heinrich & Gullone, 2006).

Jackson (2007) states that adolescents with less connection to the peer group have more feelings of loneliness than those that belong to a group. A close relationship with peers, with interest and no exploration, is crucial to help adolescents gain self-esteem, to self-value themselves and to have positive expectations to the future. However, the relationship can have a pejorative side to it (Uruk & Demir, 2003). Carter, McGee, Taylor & William (2007), found in result of a study including 652 young students from New Zealand, mid aged 16, that adolescents with a bigger link to peers were those who referred more health risk behaviours, such as tobacco and marijuana consumption, or sexual risk behaviours.

The acceptance of peers is necessary for children and adolescents of school age. The lack of friends is contradictory to that necessity of belonging and companionship. Little acceptance from peers, having a small number of friends, or not having friends at all can be frustrating to adolescents, as they can develop negative feelings of loneliness. Being isolated or not having friends can be seen as a social weakness (Stoekli, 2010).

Having friends permits sharing experiences, feelings and learning how to solve and overcome conflicts. On the other hand, lack of friends leads to social isolation and very limited social contacts, because few opportunities occur to develop new relationships and abilities of social interaction (Pérez, Maldonado, Andrade, & Díaz, 2007). Not belonging to a peer group might aggravate a higher social anxiety, affect the development of self-esteem (Kim, Rapee, Oh, & Moon, 2008), increase feelings of unhappiness and the involvement in bullying behaviours as a victim (Tomé, Matos, & Diniz, 2008 b). Quality of friends and adolescent popularity, characteristics of a close relationship, such as affection and intimacy, can come upon as social isolation protective factors and non satisfaction with social relationships (Nangle, Erdley, Newman, Mason, & Carpenter, 2003).

Lack of friends in adolescence turns out to be important to define interventions (Qualter & Munn, 2005). Since the importance of peers in the adolescence life can be of some consensus, it is of all interest to acknowledge the consequences of risk behaviours when referring to lack of friends. The objective of the current survey is to analyse the risk behaviour and the well-being of adolescents that state not to have any friends.

Method

Sample

The Portuguese survey reported in this study is a component of the Health Behaviour in School-Aged Children (HBSC) study (Currie, Roberts, & Morgan, 2004; Currie, Samdal, Boyce, & Smith, 2001; Currie, Hurrelman, Settertobulte, Smith, & Todd, 2000).

This survey is based on a self-completed questionnaire that was administered in schools by teachers. The Portuguese HBSC survey included pupils in the 6th, 8th and 10th grades (high school) ($M=14$, $SD=1.89$). The representative national sample consisted of 4877 students from 87 classes, from 125 randomly chosen Portuguese schools, representing of those school grades, as geographically stratified by Education Regional Divisions. From these 4877 students, 50.4% were girls and 49.6% boys, and they were distributed as following: 31.7% attending the 6th grade, 35.7% attending the 8th grade and 32.6% attending the 10th grade. The response rate was 92% for schools.

Procedure

The sample unit used in this survey was the class. In each school, classes were randomly selected in order to meet the required number of students for each grade, which was proportional to the number of students of the same grade for each specific region according to the numbers provided by the Ministry of Education. Teachers administered the questionnaires in the classroom. The students' completion of the questionnaires was voluntary, anonymity was assured and they completed it on their own. Teachers were only allowed to help with administrative procedures. This study has the approval of a scientific committee, an ethical national committee and the national commission for data protection and followed strictly all the guidelines for human rights protection.

Variables and Measures

The questionnaire included a large number of questions on demographics (gender, school grade and socio-economic status), school ethos, drugs, tobacco and alcohol use, aspects of behavioural and psychosocial health, general health symptoms, social relationships, sexual behaviour and social and family support.

In this study we used issues associated to adolescents' relationship with peers, such as having close friends, the number of days they spend with friends after school, such as a night out with friends; issues related to the frequency of tobacco use and illicit substances; issues associated to school context, as enjoying school and involvement in bullying behaviours; and happiness, subjective health complaints, well-being and life satisfaction.

Risk Behaviours were analysed through variables associated to tobacco and illegal substance consumption. Adolescents' relationship with peers was analysed through the variables "close friends", "having a night out with friends" and "being with friends after school". The relationship with adolescents with school was analysed through the variables "enjoying school", "been bullied" and "bullied another students". General well-being was analysed through the variables associated to physical and psychological symptoms, satisfaction with school, happiness and quality of life (Kidscreen10).

Subjective health complaints were also submitted to factor analysis ($KMO=.89$) and two factors with an explained variance of 43.4% were obtained. The first factor was composed by the items headaches, stomach, back ache, neck ache, dizziness and fatigue. This factor has an $\alpha=.74$. The second factor was composed by the following items: depressed, irritable, nervous, sleeping difficulties and fear. This factor has a $\alpha=.74$. The first factor concerns physical complains and the higher score is related to more symptoms. The same criterion was used for factor two, related to psychological complains.

The scale used to measure quality of life was Kidscreen-10 (Gaspar & Matos, 2008). This scale consists of 10 items that place the adolescent in the previous week to respond to a Likert scale of five points between "nothing" and "totally". This scale is used in this study with only one factor with $\alpha=.78$.

Satisfaction with life was measured with the scale of Cantril (1965), graphically represented as a ladder, where the step "10" corresponds to "best possible life" and step "0" represents "the worst possible life". Adolescents were asked to mark the rung that best described their feelings at that moment.

Table 1
Friends Differences

		You have one or more friends				Total	χ^2	df.
		Yes		No				
		N	%	N	%			
Gender	Boys	2083	47.5	178	68.7	2261	44.14***	1
	Girls	2303	52.5	81	31.3	2384		
Age	Younger	2223	51.7	144	57.1	2367	2.778	1
	Older	2073	48.3	108	42.9	2181		
Close Friends	I have not	10	0.2	21	8.6	31	239.85***	2
	One	56	1.3	7	2.9	63		
	Two or more	4170	98.4	216	88.5	4386		
Night out with friends	No night	2116	49.0	153	60.7	2269	16.89***	2
	One-Six nights	2061	47.7	87	34.5	2148		
	Every night	143	3.3	12	4.8	155		
Stay with friends after school	No day	480	11.2	68	27.0	548	59.79***	2
	One –Four days	2317	54.0	126	50.0	2443		
	Every day	1497	34.9	58	23.0	1555		
Tobacco use	I do not smoke	3799	88.0	235	92.2	4034	6.25	2
	Less than once a week	184	4.3	11	4.3	195		
	At last once a week – Every day	336	7.8	9	3.5	345		
Illicit substances use	Never	3902	95.7	224	96.1	4126	2.45	2
	One or More	139	3.4	5	2.1	42		
	Frequently	38	0.9	4	1.7	42		
Happiness	Happy	3617	83.6	170	69.1	3787	34.68***	1
	Unhappy	707	16.4	76	30.9	783		
Like School	Like	3396	77.8	172	66.7	3568	17.27***	1
	I don't like	967	22.2	86	33.3	1053		
Been Bullied	I have not been bullied	2582	59.9	120	47.8	2702	41.45***	3
	Less than once a week	1390	32.2	83	33.1	1473		
	About once a week	152	3.5	20	8.0	172		
	Frequently	188	4.4	28	11.2	216		
Bullied other students	I have not bullied	2758	64.4	140	56.0	2898	19.96***	3
	Less than once a week	1297	30.3	81	32.4	1378		
	About once a week	112	2.6	16	6.4	128		
	Frequently	117	2.7	13	5.2	130		

*** $p \leq 001$; ** $p \leq 01$; * $p \leq 05$

Statistical Analysis

To accomplish the analysis of the logistic regression, the variables staying with friends after school, going out at night with friends, being bullied, bullying others, using tobacco and illicit substances variables were standardized through Z-scores. Multivariate logistic models were achieved.

Results

Regarding differences between having and not having friends, for age, for the tobacco use and illicit substances no significant results were found.

Boys refer more frequently not having friends (68.7%, $\chi^2=44.14(1)$, $p \leq 001$), whereas girls frequently refer having friends (52.5%, $\chi^2=44.14(1)$, $p \leq 001$).

Those who say that do not have close friends, are those who most frequently affirm not having friends

(8.6%, $\chi^2=239.85(2)$, $p\leq.001$). For the variable going out at night with friends, those who do not go out any night, do not have friend (60.7%, $\chi^2=16.89(2)$, $p\leq.001$). The same happens to those who never spend time with friends after school (27%, $\chi^2=59.79(2)$, $p\leq.001$).

As for happiness, happy adolescents are those who most frequently affirm to have friends (83.6%, $\chi^2=34.68(1)$, $p\leq.001$).

Analyzing the variables associated with school, adolescents who enjoy school are those who have friends (77.8%, $\chi^2=17.27(1)$, $p\leq.001$). Those who have never been bullied at school, most frequently affirm to have friends (59.9%, $\chi^2=41.45(3)$, $p\leq.001$). On the other hand, those who have not bullied others at school, have at least one friend (64.4%, $\chi^2=19.96(3)$, $p\leq.001$) and those who have bullied others frequently, have no friends (5.2%, $\chi^2=19.96(3)$, $p\leq.001$).

Table 2
Friend's Means

	Yes			No			F	p
	N	M	SD	N	M	SD		
Physical Complaints	4288	9.85	4.24	252	10.29	5.08	2.471	.116
Psychological Complaints	4273	8.7	4	250	9.77	5	16.485	.000***
Life Satisfaction	4348	7.33	1.89	256	6.75	2.12	22.249	.000***
KIDSCREEN-10	4183	38.88	5.49	246	37.39	6.35	16.728	.000***

*** $p\leq.001$

One ANOVA was taken to analyze the average difference between groups having friends and not having friends and the psychological and physical complaints, satisfaction with life and Kidscreen-10.

For the groups having or not having friend and the physical symptoms, there were none significant statistical differences. However, the difference for these groups referring to psychological complains ($F(1;4521)=272.021$; $p\leq.001$) is clear as the group

with no friend has a superior mean of psychological complains ($M=9.8$; $SD=5$). Referring to life satisfaction ($F(1;4602)=22.249$; $p\leq.001$), the group with one or more friends has a superior meaning of life satisfaction ($M=7.3$; $SD=1.8$). For Kidscreen-10, the results were identical to the previous ($F(1;4427)=16.728$; $p\leq.001$), the group with one or more friends was considered to have a better well-being ($M=38.9$; $SD=5.4$).

Table 3
Predictors of not having friends

	β	E.P	Sig	OR	95%IC than	95% IC to
Gender (female)	Referent	----	----	1	---	---
Gender (male)	1.035	.160	.000	2.816	2.057	3.856
Happiness (Unhappy)	Referent	----	----	1	---	---
Happiness (Happy)	-.602	.193	.002	.548	.375	.799
School Satisfaction (Dislike)	Referent	----	----	1	---	---
School Satisfaction (Like)	-.297	.163	.069	.743	.539	1.023
Staying with friends after school	-.424	.079	.000	.654	.560	.765
Night out with friends	-.222	.098	.024	.801	.660	.971
Being Bullied	.146	.069	.035	1.157	1.010	1.325
Bullying others	.100	.071	.160	1.105	.961	1.270
Psychological Complaints	.026	.020	.187	1.027	.987	1.068
Life Satisfaction	-.015	.044	.733	.985	.903	1.061
Kidscreen-10	-.014	.019	.442	.986	.950	1.023
Constant	-2.727	.681	.000	.065		

$R_N^2 = .100$
 $\chi^2_{HL} p = 14.952; .060$

To accomplish the analysis of the logistic regression, staying with friends after school, going out at night with friends, being bullied, bullying others, using tobacco and illicit substances variables were standardized through Zscores. Through the logistic regression analysis, the goal was to find the variables that best predicted the lack of friends.

In the initial model, only significant statistical variables in the previous bivariate analyses were introduced, in other words, the variables gender (male), happiness (happy) and liking school (yes), as categorical variables, spending time with friends after

school, going out at night with friends, being bullied, bullying others, the scale of physical complaints, the scale of psychological complaints, life satisfaction and well-being were considered.

An adjusted model was obtained (Hosmer & Lemeshow $\chi^2=14.952(8)$, $p=.06$) and the equation of regression explained 10% of the variance (Nagelkerke $R^2=.10$). In this model, the explanation of the condition “not having friends” is brought by the male gender variable, unhappy, spending less days with friends after school, going out less at night with friends and being bullied more often.

Table 4
Predictors of not having friends/Younger group

		β	E.P.	Sig	OR	95%IC than	95% IC to
..	Gender (female)	Referent	----	----	1	---	---
	Gender (male)	.777	.229	.001	2.174	1.388	3.405
	Happiness (Unhappy)	Referent	----	----	1	---	---
	Happiness (Happy)	-.473	.296	.110	.623	.349	1.112
	School Satisfaction (Dislike)	Referent	----	----	1	---	---
	School Satisfaction (Like)	-.485	.253	.055	.616	.375	1.010
	Staying with friends after school	-.427	.117	.000	.652	.518	.821
	Night out with friends	-.191	.158	.227	.827	.607	1.126
	Being Bullied	.075	.100	.451	1.078	.886	1.312
	Bullying others	.079	.107	.459	1.083	.878	1.336
	Tobacco use	.651	.340	.055	1.917	.985	3.732
	Illicit substances use	.170	.127	.179	1.186	.925	1.521
	Physical Complaints	-.017	.031	.575	.983	.925	1.044
	Psychological Complaints	.036	.033	.270	1.037	.972	1.105
	Life Satisfaction	-.079	.063	.209	.924	.816	1.045
	Kidscreen-10	-.038	.025	.128	.963	.917	1.011
	Constant	-.915	1.027	.373	.401		

$R_N^2 = .121$
 $\chi^2_{HL} p = 4.392; .820$

Afterwards, the sample was split according to age (younger and older) and a regression model was carried out for each group. In these models, all the variables referring to the Chi-Square and ANOVAS were introduced as a way to verify which variable, by age, would be the best predictor of not having special friends.

In the younger group model, an adjusted model was found (Hosmer & Lemeshow $\chi^2=4.392(8)$, $p=.82$) and the regression equation explained 12% of variance (Nagelkerke $R^2=.12$). The explanation of the condition "not having friends" amongst the younger was brought by the male gender variable and staying less days with friends after school.

In the older group model, an adjusted model was equally found (Hosmer & Lemeshow $\chi^2=6.229(8)$, $p=.622$) and the regression equation explained 10% of variance (Nagelkerke $R^2=.10$). The condition explanation of not having friends amongst the older was brought by the male gender variable ($OR=2.8$; $p=.000$) with more probability of not having friends, unhappy adolescents ($OR=.55$; $p=.002$), with more probability of not having friends and spending less days with friends after school has a minor probability of having friends ($OR=.65$; $p=.000$).

The sample was split by gender and the regression models used for aged groups were again reproduced. An adjusted model (Hosmer & Lemeshow $\chi^2=15.271(8)$, $p=.054$) was found for boys, and the regression equation explained 7% of variance (Nagelkerke $R^2=.07$). The explanation condition of not having friends between boys is based on the variable spending days with friends after school and smoking. While, for girls and the group "not having friends" we obtained an adjusted model (Hosmer & Lemeshow $\chi^2=5.495(8)$, $p=.704$) and the regression equation explained 18% of variance (Nagelkerke $R^2=.18$). The explanation condition of "not having friends", between girls, are based on unhappiness, spending less days with friends after school, being often bullied at school and a higher illicit substance consumption variable.

Discussion

The purpose of this study was to analyze the risk behaviour and well-being of adolescence referring not to have friends and to understand the consequences of social isolation among adolescents.

Throughout adolescence, the need for autonomy and sharing of experiences and feelings with others of the same age means that there is a move away from

parents and a proximity to a peer group (Matos et al., 2006). Belonging to a peer group is a need to adolescents. Not to have friends is incongruous to this need for belonging and companionship (Stoeckli, 2010). The lack of friends can have several consequences for adolescents, including the consumption of illicit substances and tobacco, feelings of loneliness and unhappiness (Tomé, Matos, & Diniz, 2008ab). The results emphasize that and the important role of peers for adolescents.

Loneliness caused by social rejection might have negative consequences for adolescents (Corsano, Majorano, & Champretavy, 2006). It is necessary to solve these negative feelings before the transition into adulthood, in order to avoid the continuity of these consequences in social relationships and in mental health of young adults (Heinrich & Gullone, 2006).

The lifestyle adopted by adolescents who refer not to have friends leads to spending less time with peers. Spending less time with friends after school and going less out at night hamper the sharing of experiences so important in adolescence.

In this analysis the consumption of tobacco and illicit substance does not appear to be significant. It was only possible to identify one trend consistent with other studies, which indicated that adolescents with fewer friends are also the largest consumers of these substances (Tomé, Matos, & Diniz, 2008a; Pearson, Sweeting, West, Young, Gordon, & Turner, 2006). Substance consumption rises as a predictor of the lack of friends among girls. When analysing the involvement in risk behaviours, it is verifiable that boys have more of these behaviours (Clark & Lohéac, 2007; Kuntsche, Knibbe, Gmel, & Engel, 2005; Kuntsche & Gmel, 2004). Apparently, substance consumption among girls might limit their friendships.

However, it is visible through the results that the lack of friends influences the well-being of adolescents, revealing that they are less happy, have more psychological complains, are less satisfied with life and are less aware of well-being.

The lack of friends can interfere with another relevant area of adolescents' life, which is the school environment. Adolescents who do not have special friends often do not enjoy going to school and are more often involved in bullying. The influence of friends in adolescents' academic abilities is reported as positive when the peer group has more positive behaviours towards school and (Lubbers, Van Der Werf, Snijders, Creemers, & Kuyper, 2006) negative when adolescents are socially isolated (Rubin, Coplan, & Bowker, 2009).

In sum, the lack of friends creates dissatisfaction during adolescence, having a negative effect on their lifestyle. This becomes more relevant when logistic regression models were performed. In the general model, being a boy, unhappiness, being bullied, spending less time with friends after school and going out with friends emerge as the variables that best explain "not having friends". These variables include various contexts of adolescents' lives confirming that there may be several consequences of social isolation.

When the model is divided between groups of ages, the predictor variables of "lack of friends" is similar in both models (younger and older adolescents). Regard gender, the effect is the same, with the exception of substance consumption that rises as a predictor of "lack of friends" among girls. These results point out the importance of having friends, despite age and gender. Having friends has positive effects in several areas in the life of adolescents, providing feelings of well-being and happiness (Tomé, Matos, & Diniz, 2008b; Suldo & Huebner, 2006) and protecting them from loneliness (Gilman & Huebner, 2006) and involvement in risk behaviours (Tomé, Matos, & Diniz, 2008a).

Peer group is often associated to great engagement in risk behaviour, yet the lack of friends can also have a negative impact on health and well-being.

The practical implications of this study intend to prevent social isolation, since their consequences harm adolescents' health. This prevention can occur in school, throughout: 1) programs of personal and social skills that stimulate positive relationships among adolescents, and 2) bring the issue to the attention of teachers and families.

Key Findings:

- The lack of friends might have negative implications in the general well-being of adolescents;
- The lack of friends might increase the involvement in risk behaviours;
- The lack of friends influences feelings of adolescents towards school;

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